

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A seal dispenser for fabricating a liquid crystal display panel, comprising:
 - a table holding a substrate;
 - a syringe forming a seal pattern on the substrate by varying a position of the table,
 - wherein the seal pattern defines a plurality of image display parts on the substrate;
 - an image camera detecting an image of the seal pattern by varying the position of the table; and
 - a display unit displaying an image of the seal pattern detected by the image camera.
2. (Original) The seal dispenser of claim 1, wherein the substrate has at least one thin film transistor array substrate formed thereon.
3. (Original) The seal dispenser of claim 1, wherein the substrate has at least one color filter substrate formed thereon.
4. (Original) The seal dispenser of claim 1, wherein the image camera is coupled to the syringe.
5. (Original) The seal dispenser of claim 1, wherein at least one of the table and the syringe is capable of moving horizontally.
6. (Original) The seal dispenser of claim 1, wherein the table is capable of moving horizontally in forward/backward and left/right directions.

7. (Original) The seal dispenser of claim 6, wherein the table is driven with the same path as those for forming the seal pattern and detecting the image of the seal pattern.

8. (Original) The seal dispenser of claim 1, wherein the seal pattern has an open portion.

9. (Original) The seal dispenser of claim 1, wherein the seal pattern has a rectangular shape encompassing an outer edge of an image display region of the liquid crystal display panel.

10. (Currently Amended) ~~The~~ A seal dispenser ~~of claim 1,~~ comprising:

a table holding a substrate;

a syringe forming a seal pattern on the substrate by varying a position of the table;

an image camera detecting an image of the seal pattern by varying the position of the
table; and

a display unit displaying an image of the seal pattern detected by the image camera;

wherein the seal pattern comprises:

a first seal pattern formed at a dummy region of the substrate where an image display region is not formed; and

a second seal pattern connected to the first seal pattern and encompassing an outer edge of the image display region.

11. (Original) The seal dispenser of claim 1, wherein the seal pattern is formed of an ultraviolet-hardening sealant.

12. (Original) The seal dispenser of claim 1, wherein the seal pattern is formed of an ultraviolet-hardening sealant and a thermo-hardening sealant.

13. (Currently Amended) ~~The~~ A seal dispenser ~~of claim 1~~, comprising:

a table holding a substrate;

a syringe forming a seal pattern on the substrate by varying a position of the table;

an image camera detecting an image of the seal pattern by varying the position of the
table;

a display unit displaying an image of the seal pattern detected by the image camera;

~~further comprising:~~

a first memory unit receiving and storing data for a reference line width of the seal
pattern;

a second memory unit receiving and storing data for a measured line width of the seal
pattern detected by the image camera;

a comparing unit comparing the data stored in the first and second memory units and
outputting a control signal when an error exceeds a tolerance limit; and

an alarm driving unit generating an alarm upon receiving the control signal of the
comparing unit.

14. (Currently Amended) A method for detecting a discontinuous portion of a seal
pattern of a liquid crystal display panel, comprising:

loading a substrate;

forming a seal pattern on the substrate by varying a relative position between the substrate and a syringe, wherein the seal pattern defines a plurality of image display parts on the substrate;

aligning a start point of the seal pattern and an image camera;

detecting an image of the seal pattern by changing the relative position between the image camera and the substrate;

displaying the image of the seal pattern; and

determining whether the seal pattern has a discontinuous portion by investigating the displayed image of the seal pattern.

15. (Original) The method of claim 14, wherein the image of the seal pattern is enlarged for being displayed.

16. (Currently Amended) ~~The A method of claim 14, further~~ for detecting a discontinuous portion of a seal pattern of a liquid crystal display panel, comprising:

loading a substrate;

forming a seal pattern on the substrate by varying a relative position between the substrate and a syringe;

aligning a start point of the seal pattern and an image camera;

detecting an image of the seal pattern by changing the relative position between the image camera and the substrate;

displaying the image of the seal pattern;

determining whether the seal pattern has a discontinuous portion by investigating the displayed image of the seal pattern;

receiving and storing data for a reference line width of the seal pattern;
receiving and storing data for a measured line width of the seal pattern;
comparing the data for the reference line width and the data for the measured line width
and determining whether an error exceeds a tolerance limit; and
generating an alarm when the error exceeds the tolerance limit.

17. (New) A method of manufacturing a liquid crystal display device, comprising:
providing a first and a second substrates having at least one image display part;
dispensing a liquid crystal on either the first and second substrates;
loading either the first and second substrates;
forming a seal pattern with a sealant on the loaded substrate by varying a relative position
between the substrate and a syringe;
aligning a start point of the seal pattern and an image camera;
detecting an image of the seal pattern by changing the relative position between the
image camera and the substrate;
displaying the image of the seal pattern;
determining whether the seal pattern has a discontinuous portion by investigating the
displayed image of the seal pattern; and
bonding the first and second substrates;
wherein the liquid crystal is uniformly filled between the first and second substrates and
the liquid crystal substantially does not come into contact with the sealant before curing.

18. (New) The method of claim 17, wherein the image of the seal pattern is enlarged
for being displayed.

19. (New) The method of claim 17, further comprising:
- receiving and storing data for a reference line width of the seal pattern;
 - receiving and storing data for a measured line width of the seal pattern;
 - comparing the data for the reference line width and the data for the measured line width
- and determining whether an error exceeds a tolerance limit; and
- generating an alarm when the error exceeds the tolerance limit.
20. (New) A method of manufacturing a liquid crystal display device comprising:
- providing a first substrate;
 - providing a second substrate;
 - dispensing a liquid crystal on either the first or second substrate;
 - forming a seal pattern with a sealant on either the first or second substrate wherein the seal pattern defines at least one image display part of the liquid crystal display panel on the substrate;
- detecting an image of the seal pattern using an image camera by varying the position an image camera and the first or second substrate whereon the seal pattern is formed;
- bonding the first and second substrates;
 - curing the sealant; and
 - cutting the bonded first and second substrates into unit liquid crystal display panels;
- wherein the liquid crystal is uniformly filled between the first and second substrates and the liquid crystal substantially does not come into contact with the sealant before curing.